WHEAT STUDIES

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CANADIAN WHEAT STABILIZATION OPERATIONS, 1929-35

IN a period dating from the beginning of the crop year 1929–30 in the United States, and continuing in Canada until the close of the crop year 1934–35, centralized wheat co-operatives, with the support of government money and credit, operated in the wheat markets of their respective countries on a scale never before possible to any regular market agencies. These co-operatives did not work together and phases of their activities did not strictly correspond in time, but their market policies were similar, and a combined influence on world wheat markets might be expected. A study of this period should yield important lessons in the principles of marketing.

It is not yet practicable to bring all relevant facts under review and some movements initiated in this period are still uncompleted. In an introductory way, the developments in connection with the operations of the co-operative in the United States are herein sketched; the developments in Canada are more fully presented, the main elements of the Canadian situation between August 1931 and July 1935 being assembled in graphic form.

Questions are raised as to direct effects produced, and more general questions as to the extent to which wheat prices can be influenced by special market operations of this type. In so far as answers seem clearly indicated by the facts under examination, such answers are tentatively suggested. Definitive conclusions on the broad issues involved are not attempted.

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At the beginning of the crop year 1929–30, the United States, through the Federal Farm Board, placed large sums of money at the disposal of co-operative marketing organizations, a good portion of which was devoted to wheat marketing. Later within the same crop year, government credit in Canada, at first by provinces but afterward by the Dominion, was extended to the Canadian Wheat Pool. In both countries co-operative wheat marketing thus entered a new stage, in which it was to be so amply financed that it could undertake and carry through market operations on a scale incomparably larger than had ever before been possible to any trading agencies or combinations of agencies under open-market conditions. Not only did a farmers' co-operative in each country become the most powerful marketing agency in its own country, but the fact that both had government backing during overlapping periods and operated on the same general lines of policy increased greatly the possibility of market influence by each.

CONTENTS

There is no evidence of concerted action by these two co-operative bodies. But the contact between the wheat markets of the two countries, and particularly between Chicago and Winnipeg, is so intimate and the volume of "spreading" between them is normally so large that a price movement in one almost instantaneously becomes a market influence in the other. If prices in one are moving up, holding, or declining, it is easier for prices in the other, temporarily at least, to act similarly. Further, these two markets together form an important fraction of the world wheat market, which must be made to respond before effects in any single market can become solidly established. With substantial quantities of wheat in both the United States and Canada subject to similar marketing policies at the same time, the proportion of world wheat subject to these policies became important and the probability of world market effects was increased.

The objective of the co-operatives was the relative betterment of wheat prices. Unquestionably the main aim was to create positive effects by actually raising prices; negative effects by the checking of declines, at the stages at which this became definite policy, were regarded as mere preliminary steps toward the positive raising of prices. In pursuit of the objective, the operating policies mainly relied upon were: (1) central selling; (2) "orderly marketing; and (3) "stabilization" operations. Each of these policies rested upon a certain view of causes and effects in marketing, and the whole formed a series of assumptions, none of which can be accepted without analysis and proof based on the facts. This applies even to the basic assumption that staple agricultural products have not been treated as fairly, or in the same way, as other commodities by the open-market system. Into this field of inquiry we shall not attempt to enter, but the reservation is noted. The results during the past four or five years are among the facts on which the soundness of the theories is to be judged.

The policy of central selling rests on the view that sales by individual farmers, or by a number of separate co-operatives, are actively competitive sales and that this competition positively weakens prices. The object under this policy is to concentrate under a single central direction the selling of as many individual producers as possible. In Canada central selling for the whole wheat co-operative movement was established when the wheat pools were set up about 1924. In the

United States there had for many years been a large number of local and regional grain co-operatives, but a general co-ordination of the movement on a national scale had not been effected. The first important undertaking of the Federal Farm Board was the organization of a national central selling agency under the title of the Farmers National Grain Corporation. By the autumn of 1929, therefore, central selling was in effect in both countries.

Underlying orderly marketing is the theory that a very large measure of control over price can be exercised by control of the primary flow of wheat to the market. The theory has never been exactly defined, and conceptions of it have varied. At times it has seemed that the doctrine was that wheat should be marketed evenly throughout the year as ultimate consumption takes place. At other times it has been held vaguely that supply should be regulated to active market demand even though this did not strictly conform to current consumption. Since the object is to strengthen price, the inevitable tendency in practice, whenever price was considered unsatisfactory, was to restrict marketings without regard to the rate of consumption or to relative market demand. The policy has tended always to merge into a policy of withholding existing supplies from market in order to force price upward. Financial strength is necessary for this latter policy.

What were called "stabilization" operations in both countries were not accurately named. The policy was not the smoothing out of temporary fluctuations, down or up, within a natural crop-year price level, but the raising or pegging of price. It was essentially a purchasing policy, with the idea that by some method and at some time in the future the accumulations could be worked off without adverse effects. It was under this policy that "removal of surpluses" from the market was attempted.

A body of theory with regard to the influence of surpluses on price levels had come to exist. If total supply produced cannot be curtailed it was commonly held that much the same effect on price can be brought about by buying up the estimated excess and withdrawing it from current marketings. With respect to production the Federal Farm Board was given power only to advise, but it was a prominent part of the policy of the Agricultural Marketing Act to "prevent such surpluses from causing undue and excessive fluctuations or depressions in prices for the commodity." Extreme views were commonly held as to what could be accomplished by the injection into the market of special purchasing, not by ultimate consumers but by market operators. Illustrative of these extreme views was the appeal to the Federal Farm Board by the North Dakota–Montana Wheat Growers Association in a telegram, sent on September 24, 1929. This telegram, as quoted in the report of the Senate Committee on Agriculture and Forestry,[1] was as follows:

> Markets at terminals are dead. Prices are continually falling. Wheat is away below cost of production and farm problem is growing more acute on account of falling prices. This condition can be remedied only by Farm Board. Immediate establishment of a stabilization corporation with power to purchase some wheat will solve the difficulty. The effect of such corporation would be instantaneous. If they bought just a little wheat, prices would improve not less than 20 cents per bushel. A sure profit would be made by stabilization corporation. All buyers on terminal markets would wake up and start buying and would find storage space. We urge you to immediately set your machinery in motion for formation of stabilization corporation and thereby save farmers millions of dollars.

But can substantial price betterment be effected by marketing policies such as these? While it is everywhere recognized that there are basic factors in price making, such as total supply, demand, and purchasing power, nevertheless the opinion is commonly held that within an indefinitely wide range price trends can be directed, checked, or controlled by marketing technique and by purchases, sales, and withholdings by market operators. It would seem at times that large speculative operators are believed capable of raising or lowering prices almost at will, and it is certainly common practice to offer explanations of any up or down price in terms of "bulls" or

[1] *Activities and Operations of the Federal Farm Board* (Report No. 1456, July 29, 1935).

"bears." Among those disposed to regard any rise in price as only natural and proper, all declines are attributed to "bear" attacks. That manipulation of prices is feasible and is widely practiced is a general opinion.

Because the operations of the co-operatives, beginning in 1929–30, constituted the most powerful and sustained "bull" operations in the history of wheat markets, a study of the developments that occurred, with a view to attributing effects to their true causes, is of the greatest importance owing to the light it should be able to throw on the relative strength of the factors that make price. Details of these transactions are available in public records, and they are particularly complete in respect to the "stabilization" activities in Canada. It is the main purpose here to present the details of the developments in Canada in a form that may facilitate analysis. A full study even of the Canadian situation will not be undertaken. Before treating the details of that situation, and because what happened in Canada cannot be properly judged by itself without reference to occurrences in the United States, it will be well to sketch briefly the course of events in the latter country and to point out correspondences and differences in the two developments, and to indicate where combined influences on the market may have been exerted.

American and Canadian Developments Compared

Government loans and guarantees gave the co-operatives financial resources far beyond the control of private market operators. Loans from the Federal Farm Board, except for relatively small sums, were made to and through the Farmers National Grain Corporation—the new central selling organization — and the Grain Stabilization Corporation. In membership and in the personnel of directors, these corporations were practically identical and they occupied the same offices. There were, moreover, many inter-corporate transactions between them. Without attempting to classify the loans according to nominal borrower, it will be sufficient for the present purpose to state the aggregate of all loans, which was the extent of government financial assistance to the system. In 1929–30 the Federal Farm Board's total advances on grain account were \$107,911,676.78; in 1930–31, \$212,276,860.05; and in 1931–32, \$235,955,890.54. Partial repayments were made each year, but on June 30, 1932, at the end of the active period of loaning by the board, loans outstanding were \$217,283,078.29. In no year did the co-operatives borrow the full amount of the appropriations in their favor. These are very large amounts and they were in great part only supplementary to resources available from all regular sources. In December 1930, the board stated that the Farmers National "borrows but a relatively small amount of its money from the Federal Farm Board. Most of the money used by the National is loaned to it by private or commercial banks and Federal intermediate credit banks, and some from the sale of stock to its member farmers' grain co-operatives."[1] The Stabilization Corporation also borrowed elsewhere; on June 30, 1932, it owed commercial and federal intermediate credit banks \$31,481,781.85. No unified marketing agency ever before possessed such money power.

As the main point of interest in this study is the play of money power in the open market, it will not be material to inquire into the detailed administration of all the sums advanced to the co-operatives. Except in so far as the incurring of losses by the revolving fund is evidence that events did not turn out according to intentions, this phase of the matter, also, is not of prime interest. These aspects have been examined into and reported upon by the Senate Committee on Agriculture and Forestry. Making allowance for all doubtful applications of money and for the reduction of working capital through losses, it still remains true that the financial resources used to promote certain marketing policies were throughout far greater than were ever before similarly employed.

In Canada the governments did not make cash loans to the Wheat Pool but guaranteed its accounts at the banks. The provincial governments of Manitoba, Saskatchewan, and Alberta gave such guarantees to cover the

[1] *Bulletin No. 3*, Federal Farm Board, December 1930, p. 8.

marketing of the 1929 crop, and the Dominion government later gave a similar guarantee for the 1930 crop and still later enlarged the guarantee to cover stabilization operations. Under these conditions the Pool had the financial power to pursue any policy of which the governments concerned did not disapprove.

Market operations on a very large scale were carried on in both countries. These may be considered under the two divisions of the orderly marketing of country-run wheat and of stabilization purchases. In Canada, beginning with the crop year 1925–26, approximately 50 per cent of the Canadian crop was each year marketed under that system and sold through a central selling agency. That was true of the crop years 1929–30 and 1930–31, after which the provincial contract pools ceased to operate. The percentage coming under co-operative central selling in the United States was not nearly so large, but the quantities are impressive. Handlings by terminal grain co-operatives were officially estimated at approximately 105 million bushels in 1929–30, 164 million in 1930–31, and 185 million in 1931–32.[1] If these figures can be taken at their face value, they represent about 23 per cent of the wheat that American farmers are estimated to have sold during these years, and in the third year over 25 per cent.[2] If "orderly marketing" can influence prices, some definite effects should be traceable to transactions on so substantial a scale.

Under stabilization operations there are the two possible price influences, the one from the purchasing and the other from the holding off the market after purchase. A little wheat was bought at a fixed price by the Farmers National in January 1930, and extensive buying began with the establishment of the Stabilization Corporation on February 11. By June 30, 1930, its net holdings, deducting some sales, mostly for export, were about 65 million bushels.[3] These were important quantities, absolutely and relatively, for the board was able to report that "from the day of its organization until June 30, 1930, the Grain Stabilization Corporation and the co-operatives affiliated with it held control of a quantity of wheat equal to approximately one-half of the visible supply of wheat."[4]

On November 15, 1930, buying by the Stabilization Corporation was resumed on an extensive scale[5] and by July 1, 1931, net purchases for the period had reached 192 million bushels. Between those dates reported receipts at primary markets totaled only some 200 million bushels; this meant that the Stabilization Corporation had taken practically complete possession of the domestic market during that period, though primary receipts do not fully cover farm marketings. On July 1, 1931, its total holdings were the enormous quantity of 257 million bushels. As the total carryover of the United States on that date was only 340 million bushels, the Grain Stabilization Corporation was in control of a very large percentage of the old-crop supply, and what it was holding off the market represented much more than the excess over normal stocks. If there is validity in the theories held as to the effects on price of the existence of excesses in stocks and as to the possibility of neutralizing these effects by buying up the excess and holding it, then the conditions as of July 1, 1931 might well be expected to show results. At this date the Canadian Wheat Pool was holding, and not attempting to sell, some 76 million bushels, under Dominion government guarantee; and a little later in July it began active buying on stabilization account. On August 1, 1931, it was carrying over 79 million bushels. The total Canadian carryover on that date was 140 million bushels, so that the Pool was in control of more than 50 per cent of the old-crop supply. A very substantial proportion of the carryover of the wheat in North America was therefore in the hands of co-operatives at this time and subject to their common policy.

In subsequent stabilization operations in

[1] *Third Annual Report of the Federal Farm Board*, December 1932, p. 34. These figures exclude grain handled for the Grain Stabilization Corporation.

[2] Percentages derived with the aid of official estimates of "wheat sold or for sale," and stocks on farms, given in *Yearbook of Agriculture, 1935*, pp. 359, 363.

[3] A revised figure (see chart in *Third Annual Report*, p. 65) is 57 million.

[4] *First Annual Report of the Federal Farm Board*, p. 32.

[5] The chart in *Third Annual Report* shows some purchases before November 15.

Canada the holdings of the Agency[1] increased until by October 1934 they had reached 235 million bushels. While this is a little short of the peak of the accumulations of the Stabilization Corporation in the United States, relative to the size of the markets it was a very much larger quantity. From that time until the close of its operations the Agency owned or had a claim on quantities equal to practically all the wheat in Canada. In one month, October 1932, the Agency purchased nearly 64 million bushels and sold nothing, which must surely be a record for purchasing by any market agency. Transactions by the co-operatives were therefore of sufficient magnitude to make them an important test of the theories on which they were grounded.

While the developments in the two countries were contemporaneous, it will be seen that particular phases did not completely synchronize, and there were differences in conditions which are of interest. Government assistance was given in the United States in pursuance of an act of Congress laying down a national marketing policy, passed before world price deflation began to create special financial and price problems. Canadian government support, some months later, was extended in the beginning as temporary relief in emergencies arising out of deflation, and no statute embodying a general marketing policy was passed until the summer of 1935.

It was in the middle of the crop year 1928–29 that Congress took action. In that crop year the largest world crop since 1915, in proportion to population, had been produced. Early in the year prices had fallen. The movement of wheat in international trade increased and for twenty-two consecutive weeks, from the beginning of November to the end of March, world shipments averaged over 20 million bushels per week. This was a record movement for a period of that length, but supplies were so abundant that continuance of shipments at that rate for another twenty-four weeks was necessary if the surplus in exporting countries was to be fully used and carryovers not increased. It was under these conditions that Congress was called to deal with the problem of raising agricultural prices. The result was the Agricultural Marketing Act, approved June 15, 1929.

In this Act Congress formally declared its policy to be to promote "the establishment and financing of a farm marketing system of producer-owned and producer-controlled co-operative associations and other agencies." The object was "to promote the effective merchandizing of agricultural commodities in interstate and foreign commerce and to place agriculture on a basis of equality with other industries." The powers conferred were wide enough to provide for the setting up of a complete marketing system, including clearing house associations and a system of price insurance to take the place of hedging, as a competitor of or substitute for the existing marketing system, which by implication was declared not to be merchandising effectively and not to be giving agriculture equal treatment with other industries. Money to effect these objects was to be loaned only to producer-owned and producer-controlled co-operative marketing associations as to stabilization corporations in which such associations held all the voting stock, by a Federal Farm Board, which must invite the co-operatives to establish advisory committees for each commodity with power to make representations to the board. To finance the undertaking a revolving fund of $500,000,000 was appropriated. No complete, self-contained marketing system was as a matter of fact set up during the period, and, while there were many direct dealings with domestic millers and in export trade, the operations of chief interest are those designed to affect prices in the regular markets by methods of distributing sales, by buying and holding.

What was embodied in the Agricultural Marketing Act was practically identical with the policy and aspiration of the Canadian Wheat Pool. This situation and what seemed its possibilities were taken serious note of, not only in North America but throughout the world and particularly in Europe. In North America there was created an expectation of higher prices, and North America was then in an optimistic mood as to all values. Market prices rose above the export basis even

[1] For the meaning of this term, see below, p. 260.

on the calling of Congress and before it had acted, and after a recession in May on curtailment of export business they soared to a great peak in July. In Canada, where a small crop was in prospect, the premium over world prices was then extreme. In Europe the plans and prospective resources of the co-operatives and the extraordinary action of the North American markets in the face of heavy world supplies created deep concern. This contributed to the planning of defensive measures. When the Federal Farm Board began to function in June and July 1929, United States wheat prices not only were above the export basis, but were not relatively low as compared with general wholesale prices on the basis of the relationship existing in 1913–14. When Canadian "stabilization operations" began in July 1931, just after active purchasing had ended in the United States, wheat prices were low, absolutely and relatively.

Three Pertinent Questions

Experiments on so great a scale must furnish important lessons in marketing. Among the general questions to which answers are needed are these:

1. Can a market operator, financially strong, bend the price line at will and make it turn in the direction he wishes it to take?
2. Can such an operator negatively block or divert any major trend of prices resulting from the play of regular market forces?
3. To what extent and under what conditions can he either positively or negatively influence price fluctuations and temporary movements?

The first question is phrased in extreme terms. In most minds the question would probably exist in a somewhat modified form. Few may believe that an operator can move prices absolutely at will without at least some selection of times and conditions. The real issue is, however, whether an operator can by his activities make seasonal price levels, as distinguished from temporary fluctuations, which are different from those which would have existed under regular market forces. If an operator seems to be effective only when he has correctly anticipated a normal movement, then he is merely riding the wave and is not a force in himself. The second question covers cases of longer-term trends, rather than crop-year levels, where effects may be assumed to be found in definite interference with such trends rather than in an immediate upturn or downturn in the price line. The third question would cover all merely temporary or lesser effects. To these questions the results of the experiments under review may not afford entirely general answers, since the conditions under which they were conducted were in so many respects unusual.

The American Experience Summarized

It is not within the present purpose to examine in detail the course of developments in the United States or attempt to measure the price influences that may have been exerted there by the operations of the co-operatives. The Federal Farm Board in its *Third Annual Report* claimed that at several periods the spread between United States and world prices had been narrowed to the advantage of United States producers as a result of its policies, and offered estimates to indicate that on the whole the direct financial benefits to producers had somewhat exceeded the losses to the revolving fund. Special reference was made to the period between November 15, 1930 and the early part of June 1931, when United States prices were sustained at a practically constant level while world prices fell away. It was during this period, in the words of the report, that "the Stabilization Corporation was authorized to purchase as much wheat as was necessary to prevent further declines in the price for the 1931 crop in spite of the weak world markets," and made net purchases almost equal to all the receipts of wheat at primary markets. Anyone can pay as high a price for wheat as he chooses, and, if he is prepared for a time to buy all the wheat offered, the market quotations will reflect his price. This price, however, will be an arbitrary buying price and not the market price in the only sense in which that is really significant. The price which market operations are designed to effect is the price at which it will find other buyers and will go into use. The Stabilization Corporation held domestic prices in the United States by accumulating some 192 million bushels, but did not hold world prices; and at the conclusion of its heavy purchasing United States prices fell precipitately, though only temporarily, to something like a normal discount below world prices. Among the conclusions of the Federal Farm Board from its experiences were:

(1) Prices can be maintained above their normal levels if some agency is prepared to pay the costs. (2) Stabilization costs must be paid by someone. To help farmers, they would have to be paid by others, either in higher prices or higher taxes. The Agricultural Marketing Act makes no provision for paying the costs on a permanent basis, other than from the limited revolving fund.[1]

Even if the above effects on prices were of the kind that are important from the standpoint of this study, they were admittedly temporary, and therefore, to the extent to which the claims made would stand up under examination, supply evidence only under question No. 3 as to influence on fluctuations and temporary movements.

To the more fundamental questions, No. 1 and No. 2, the experience under the Federal Farm Board seems to suggest unqualified negative answers. That there were forces in the market infinitely more powerful than the instrumentalities at the command of the co-operatives is a plain tale of history.

In support of this view are the observations and conclusions of the board itself, which throughout the three years of its main activity maintained to a notable degree a balanced, reflective attitude toward its own work. The desire and the intention were to raise prices. As early as August 1929, the board "expressed its sympathy with desires of co-operatives to hold wheat for better prices"; on October 26, 1929, it announced its belief "that based on known world supply the present prevailing prices are too low," and "a number of different steps was taken during the year to prevent what were considered undue and unwarranted depressions."[2] Yet wheat prices, both absolutely and relatively, declined almost continuously for the next three years. For the position existing in the autumn of 1929 the board believed "that the remedy lies in more orderly marketing";[3] and in addition to pushing forward the establishment of a national central selling agency it offered supplemental loans on wheat carried and then took "the far-reaching step" of loaning at stated values, which became at once higher than market values and made it profitable to hold wheat. "In January, however, the decline began again, and in harmony with a recommendation of the wheat advisory committee, the board decided to employ the most powerful weapon against falling prices at its disposal under the agricultural marketing act. It recognized the newly-created Grain Stabilization Corporation and authorized it to purchase wheat."[4]

While putting to the test the full powers entrusted to it, the board studied the problem as a whole and early recognized the superior force of those market conditions which are grouped under the terms supply and demand. It became its reasoned judgment that prices would for some time continue downward and that the only effective recourse was to the adjustment of production to demand.

The board could see no hope for arresting such a movement, or preventing its serious consequences to American wheat farmers, by co-operative marketing as such, by stabilization measures of the type already employed, or through adopting any of the proposed measures designed to dispose of the surplus abroad at prices below domestic levels. The obvious and economic remedy for the overproduction of wheat, to which our own wheat growers are contributing, is curtailment of production, with a view to reducing and, if possible, eventually eliminating our export surplus so that the tariff might become effective on American prices.[5]

. . . . Merely taking more wheat off the market and holding it could not long prevent such declines in price as were justified by conditions then existing, and would have had numerous undesirable consequences, including the further accumulation of stocks at a probable loss to the Public Treasury.

It was clear, in the early stages of the board's work, that no important stabilization efforts could succeed, except temporarily, unless farmers themselves adjusted production to prospective demands.[6]

[1] *Third Annual Report*, p. 61.
[2] *First Annual Report*, pp. 26–27.
[3] *Ibid.*, p. 27, footnote.
[4] *Third Annual Report*, pp. 63–64.
[5] *First Annual Report*, p. 35.
[6] *Ibid.*, p. 34.

These views were but confirmed by subsequent experience, for we read in the *Second Annual Report:*

. . . . Prices can not be kept artificially high over long periods by such methods. The experience of the past two years shows it is futile to engage in stabilization purchases for any product over a period of years in the face of a constantly accumulating surplus of that product.

Stabilization involves selling as well as buying; producers must face this fact. Many people have thought "stabilization" means to hold the price permanently higher than it would otherwise be. This can not be done without control of production.[1]

The final summing up in the *Third Annual Report* is this:

Experience with stabilization thus demonstrates that no measure for improving the price of farm products other than increasing the demand of consumers can be effective over a period of years unless it provides a more definite control of production than has been achieved so far.[2]

Significant of the reaction of the new Administration to all these developments was the executive order effective May 27, 1933, under authority of the Legislative Appropriation Act.

The functions formerly exercised by the Farm Board in respect of making loans to stabilization corporations were abolished by the President's order, and the order directed the prompt and orderly winding up of the activities of the stabilization corporations then in existence. Loans to cooperatives continued to be made from the revolving fund; but in accordance with the provisions of the Farm Credit Act of 1933, the Farm Credit Administration set up a central bank for cooperatives, with a system of regional banks thereunder, with a view to making the new banking system the future principal agency for extending Government credit to agricultural cooperatives.[3]

It is significant too that the new constructive policies adopted under the Agricultural Adjustment Act were based, not on market operations, but on control of supply. Of somewhat corresponding significance in relation to stabilization operations may be the fact that, when the Canadian Parliament established a Wheat Board to take over the position after four years of stabilizing activity, it gave that board no power to carry on such operations but only to buy direct from producers, and indicated (though not in unqualified language) a selling and not a holding policy.

In both countries it was frequently claimed that the market would have utterly collapsed at some stage without the support furnished by the co-operatives and that assuredly the whole position was saved from becoming very much worse than it would have been if left alone. What might have happened if something had not been done which was done, can, of course, never be proved. Probabilities may, however, be weighed. The world's wheat market has never in its long history suffered a complete collapse. As a whole it is so vast, so regular, and so close to basic needs that the probabilities are against collapse under any conditions short of complete stoppage of all the world's economic machinery. It is held there must have been powerful effects from the exercise of such powerful agencies, even if these effects cannot be clearly traced. But the defect of this simple argument is that the effects of marketing operations may not be direct effects on prices at all, but indirectly or primarily effects on other market conditions which may neutralize, or convert into something altogether different, the influence on price which the operations are calculated to exert. The immediate reaction to active buying or selling by a special operator may be only the temporary withdrawal of other traders from the market or the stimulation of counter trading.

The Federal Farm Board discovered and fully realized that almost every market policy applied made new difficulties somewhere and brought into play opposing forces. The following are the important "conclusions" from its experience, as stated by the board:

1. In a major stabilization operation with a commodity such as wheat, it is inevitable that a large quantity of the commodity must be taken in order to exert any material effect on the market. Furthermore, the accumulation of a substantial volume, the most of which necessarily must be in the visible supply, has a somewhat depressing effect upon prices. Anouncement that such ac-

[1] *Second Annual Report*, p. 37.

[2] *Third Annual Report*, p. 62.

[3] *Activities and Operations of the Federal Farm Board*, pp. 31–32.

cumulations will not be sold is not sufficient to reassure buyers unless the quantity thus held renders difficult the purchase of supplies adequate to the demand. Even then the demand is curtailed or limited to immediate requirements, and forward buying in anticipation of future needs is lessened.

2. Purchases in the cash market alone are inadequate to sustain prices and do great injury to legitimate operations in the option market by throwing cash prices out of line with the futures. This being true, a stabilization activity must be conducted along the entire line with the inevitable result that large purchases for future delivery must be made. Wheat thus secured by delivery on futures contracts is contract grade and may vary in actual value from 2 to 5 cents below country-run wheat.

3. Transactions in the futures market having been entered upon, there is no good place to stop, even within the limits of a single crop-marketing period. Option prices are published covering a period of from six to nine months in advance, and as soon as any future option is abandoned or militated against, that option gets out of line with the cash market and other options. This imposes considerable hardship upon processors whose customary practice of hedging or insuring their purchases is conducted through the futures market.

4. The storage problem is a serious one in any stabilization activity. The grain must be in a position where warehouse receipts can be issued against it as a means of insuring safe delivery of the commodity. The facilities for doing this are limited. Mostly they are needed for the ordinary storing and merchandising of all kinds of grain. Therefore, when a large quantity of wheat is purchased and held in terminals or public warehouses, it not only becomes a part of the visible supply, but renders the facilities inadequate for handling the grain of the growers, merchants, and processors. Some of the grain of the stabilization corporation inevitably gets out of position for most economical use or sale.

5. Stabilization corporation activities, as usually considered, mean principally buying, not selling. This is particularly true when the price is low and markets are weak. Sales by a stabilization corporation tend promptly to turn the market downward and abundant complaint is received from growers who are still holding their grain. With the price at a level satisfactory to growers, assuming it can be put there, wheat rolls into the terminals. When the terminals are full, farmers who can not sell complain bitterly; the visible supply is increased; in the first six months of the new crop year our best export period passes and the stabilization corporation finds itself with abundant supplies to be marketed in competition with all export countries. Charges for carrying wheat are cumulative at about 1½ cents per bushel per month, and the operation, to break even, must include these charges when the grain is sold.[1]

Canadian Pool Operations to June 1931

We come now to the developments in Canada. At the opening of the period under review the co-operative structure consisted of three wheat pools organized provincially under the names of the Alberta Co-operative Wheat Producers, organized in 1923, and the Saskatchewan Co-operative Wheat Producers and the Manitoba Co-operative Wheat Producers, both organized in 1924. These pools were based on contracts with individual growers under which all farm surpluses of wheat were to be turned over under damages to the pools on ordinary pooling principles. The three provincial pools in turn organized a common central selling agency, incorporated as the Canadian Co-operative Wheat Producers, Limited, which by agreement was constituted the sole selling agency for the pools. All of the stock of the selling agency was owned by these pools. The three provincial pools had each established a subsidiary pool elevator company, the construction or purchase of elevators being financed by deductions made each year from money owed to producer members.

The provincial pools did not purchase from members on delivery, but made only an advance payment at that time with subsequent distributions, and were responsible in the end only for net receipts. The pool system, which we may refer to as the Pool, did not hedge its holdings in the futures market; the producer members carried the risk. It held the theory that if hedging sales were eliminated an important depressing influence on prices would be removed. The active marketing policies mainly relied upon were central selling, as much of it direct selling as possible, and orderly marketing, which was conceived rather as fairly regular selling than as a starving of the market by withholding supplies. Prior to 1928–29 the Pool had no disproportionate carryover at the end of any season. On one or two occasions the Pool had made moderate

[1] *First Annual Report*, pp. 33–34.

"stabilizing" purchases in the futures market when it considered prices weak, but this practice had not been extensive.

During the first five months of the crop year 1928–29 the regular policy of distributing sales was continued, the sales averaging about 23 million bushels per month. As the total deliveries to the Pool out of the 1928 crop turned out to be 244 million bushels, this was a very satisfactory rate of sale. The illogical rises in North American prices, to which reference has been made, then occurred, and, as European markets did not follow the first rise (January–February) at all and only partially followed the second (June–July), export sales fell off. In the seven months January–July 1929 the sales by the Pool, including sales for domestic consumption, were at a rate only a little over one-half of that during the preceding five months. Since it had placed no hedges and was not, therefore, under the necessity of clearing them in the open market, the Pool was not tied to market prices and could have continued to sell regularly at the best cash prices it could get, but it evidently either held to the market prices or became a reluctant seller. Indeed, on the dip between the two price rises it made purchases of a few millions of bushels in the futures market as a strengthening influence, but sold these out within a few weeks. The result was that on August 1, 1929, the Pool carried over some 77 million bushels, of which 48 million bushels were unsold and the balance was held against open sales contracts. By this time the Federal Farm Board had been established.

Under the Pool's arrangements with the banks, which made advances against pledged grain backed by the open guarantee of the three provincial pools, a clear cash margin of 15 per cent had to be maintained. On all the old wheat carried forward the Pool had advanced growers \$1.18½ per bushel, basis No. 1 Northern. On all the new-crop deliveries the first advance made was \$1.00 per bushel. In the month of August 1929, the market price had averaged \$1.58, but by early January 1930 it had dropped below \$1.40 per bushel and was still steadily falling. By that time it was evident that with its existing resources the Pool could not long maintain its margin on the old wheat it carried and might even soon be in danger in respect to its advances against new wheat. Because it had not hedged and yet had made substantial payments to members, it had become subject to the risks of current price changes. Its difficulties were increased by the fact that it was then carrying a substantial "long" account in the futures market, for it had taken over futures contracts when its sales of cash wheat were made, and had held these contracts, instead of immediately selling them, in the hope of higher prices later. Increasing margins had to be put up in the clearing house against this account.

Under these conditions the Pool had to obtain further financial backing or liquidate part of its holdings, and might be required to hedge the balance for extra security. Rather than face this course, an appeal was made to the governments of Alberta, Saskatchewan, and Manitoba for financial assistance on the grounds that forced selling would prove disastrous to prices, whereas there would be hope if the Pool could continue on the lines of orderly marketing under central direction. It was an appeal to preserve the Pool and its policies of marketing. The governments agreed to act, and under the authority of special statutes first guaranteed the existing indebtedness of the Pool to the banks and any further advances found necessary up to August 1, 1930. Later, under certain conditions, the guarantee was extended to cover indebtedness standing against old wheat until such wheat was sold. When these accounts were finally liquidated, the three governments were called upon to pay the banks \$22,217,302.25. The provincial pools had agreed to repay any losses their respective governments might sustain and had pledged as security all their assets, including their interests in the subsidiary elevator companies. Manitoba later wrote off part of the indebtedness to it, but beyond this, what loss, if any, the governments may ultimately suffer is not yet determined.

Thus relieved of embarrassment in respect to wheat that came into its hands prior to August 1, 1930, the Pool then had to meet the handling of the 1930 crop on its own resources. On August 16, with the market price at 95⅜ cents, it announced that an advance of 70 cents per bushel would be made on deliveries during the new crop year. By August 26 the price had dropped to 88⅝ cents, and it was announced that henceforth the advance would be only 60 cents per bushel. By October 15 the price had become 72⅛ cents, and the advance was reduced to 55 cents. On October 11 the price reached 65⅝ cents, and the advance was further reduced to 50 cents per bushel. All commodity prices were weak and still falling, and rather than face the possibility of still smaller advance payments the Pool again appealed for government support. The governments of the three provinces were vitally concerned in the situation because the declining prices were seriously affecting the realizable value of the old stocks of wheat still being carried under their guarantee. They therefore joined with the Pool in making urgent representations to the Ottawa government that it should step in to protect them as well as the Pool. The joint delegation of provincial premiers and Pool officials placed before the Dominion government three courses:

1. That the Dominion guarantee producers a minimum price of 70 cents per bushel, which was higher than the then market price.
2. That the Dominion give a guarantee to the banks to enable the orderly marketing of the 1930 wheat without necessitating the lowering of the advance payment of 50 cents per bushel.
3. That the Dominion establish a Stabilization Board to purchase wheat in the market whenever the price fell below a certain minimum, it being represented that this would not involve any of the dangers encountered by the Federal Farm Board since price levels had now become so low.

Of the three courses the Dominion at the beginning chose the second, and guaranteed advances in connection with the marketing of deliveries from the 1930 crop. Legislative authority for the guarantee was later provided in a clause inserted in the annual Unemployment and Farm Relief Act, under which the government was given wide emergency powers to meet the prevailing conditions of economic depression. Under the authority of these acts the government each year passed an order-in-council confirming previous guarantees to the banks and extending the guarantees for twelve months. There was no legislation embodying a general marketing policy. With its accounts guaranteed, the Pool did not press sales of 1930 wheat and at the close of the crop year it carried over some 76.7 million bushels, which was a little over 50 per cent of all the wheat that had come into its possession within the year.

Canadian Stabilization Operations

In June 1931, the general manager of the Pool recommended to the government that a policy of purchasing in the open market to influence price should be permitted, and an order-in-council was passed extending the scope of the bank guarantee to cover also advances for the purchase of wheat or other grains deemed necessary "to secure the advantageous sale of such grains already delivered or to be delivered" to the Pool. Although by this language the stabilizing operations were to be for the direct purpose of facilitating the advantageous sale of Pool stocks on hand, the policy was given a liberal interpretation in practice, and became a general attempt to support the Canadian market. No effort was made during the following four years to clean up the carryover from the 1930 crop, which continued to be carried in the books at a practically unchanged total. Moreover, no further deliveries of farmers' wheat were received by the central selling agency of the Pool after 1930–31. It had become converted into a stabilization corporation and thus the third recommendation of the provincial premiers and Pool officials went into effect. The remaining recommendation, a guaranteed minimum price to producers, was later to be experimented with when a Wheat Board was set up in 1935, which was given no power to continue stabilizing operations.

That no more Pool wheat was delivered to the central selling agency was due to developments in connection with the adjustment of the debts to the provincial governments. The security of each of these governments was a prior charge on the assets of the Pool within that province and the only substantial assets in the system were the subsidiary elevator companies. Terms were arranged with each of these elevator companies under which they were to be managed practically as regular line elevator companies. Assistance in financing was given these companies by both Dominion and provincial governments, but into this it is not necessary to enter. Under these conditions the provincial pools could not expect to hold their membership or renew contracts with them and the Manitoba pool was formally wound up and the other two ceased to function. The Pool elevator companies undertook to manage any voluntary pools that might be formed.

Canadian Co-operative Wheat Producers, the central selling agency, however, remained in existence. But its position became anomalous. It had a board of directors appointed by and representative of the provincial contract pools, and now there were no provincial contract pools. Its credit resources consisted of the government guarantee. Its legal position was never defined. If it made profits, it was never clear where these profits should go, but all losses must inevitably fall upon the government. It was in reality a government stabilization agency operating within limits from time to time approved by the government; and it was as such that it had power, and an authority which was respected in the market and enlisted in no small degree the co-operation of the trade. To distinguish these new conditions from the old it may be well henceforth to refer to the Canadian Co-operative Wheat Producers, Limited, simply as the Agency.[1]

There is no evidence that the experience of the Stabilization Corporation in the United States was carefully studied before the new policy was adopted and applied or at any stage thereafter. In recommending the policy in November 1930, the provincial premiers and Pool officials represented that, since prices had then become so low, the dangers would not be encountered that had been met in the United States. This showed a recognition that the first buying campaign by the Stabilization Corporation had not been effective, but this result was attributed to contingencies, vaguely referred to as "dangers," and not to the deeper causes which the Federal Farm Board itself realized to exist. Before the new Canadian policy was adopted in July 1931, the second great buying campaign had been concluded in the United States, and domestic prices there, after being sustained for a time by purchases on a gigantic scale, had already collapsed temporarily toward a world parity level. The lessons of this experience do not seem to have been taken into account. It also turned out that prices were not then at the bottom, for they continued to fall for another eighteen months.

The Agency chose to operate almost entirely in futures contracts and not in cash wheat. The main reason assigned by the Agency was that futures contracts could be carried at somewhat less cost than cash wheat. Unquestionably also large operations can be transacted more conveniently and simply in futures contracts. Even before the close of 1930–31, about 40 per cent of the Agency's holdings had been converted into futures. At various periods in the following years, deliveries, which are at the option of the seller, were made on contracts the Agency was holding, but these also were converted as soon as practicable. This held until the month of May 1935, when the Agency took delivery of some 50 million bushels. Conversion is effected by selling cash wheat and taking over and keeping the buying hedge which the purchaser of the cash wheat had previously put on, or simply by selling cash wheat and making a corresponding purchase in the futures market.

The general effects on the market position of holding cash wheat and holding futures are much the same. It is important that this should be understood. When an owner of cash wheat

[1] In contemporary discussion of the market activities of the Canadian Co-operative Wheat Producers, the new conditions were commonly given recognition by characterizing them as activities, not of the organization, but of its new manager, Mr. John I. McFarland. Mr. McFarland had been appointed manager as of November 30, 1930, in pursuance of an agreement reached earlier in the autumn to install a general manager acceptable to the banks. Despite the large part played by Mr. McFarland in the shaping of subsequent policy, it is misleading to speak of the later activities as those of an individual.

withholds it from sale, it is plainly seen that this must reduce the quantity on the market. When an operator chooses to hold futures contracts, and does not wish to take delivery of cash wheat, he can continue to do so only by renewing contracts as each matures; and to succeed in doing this he must offer a price for a distant future that will make it worth while for the other party to the contract to continue to carry the wheat rather than make delivery or sell it. Hence cash wheat was actually withheld from the market by someone when the Agency's policy of holding futures was in force.

The operating policy of the Agency, as it came to be understood by the management itself, is set forth in statements before parliamentary committees. For example, in 1934 the general manager stated: "Stabilization is a misnomer; it is really not stabilization; it is really a supporting operation in that period of the year when the farmers are delivering wheat."[1] By 1935 his understanding of what he had done had become even more specific: "Except as to purchases made by a reduced number of speculators and the purchases made for export and domestic use, I have during the last four years been buying the hedges on the wheat produced by the farmers of Western Canada."[2] As will be seen, there are facts which seem to lie outside the boundaries of a policy so described. All the heavier buying occurred when prices had a downward trend, but it is true that most of it was in the autumn months. In the United States, on the contrary, the Stabilization Corporation purchases were mainly in February–June 1930 and November–June 1930–31. Farmers' deliveries were not important in those periods, but market prices were tending to fall.

Particulars of the operations of the Agency between July 1931 and May 31, 1935, are available in evidence before the two parliamentary committees just mentioned. In 1934, on motion of a member of the opposition, the Banking and Commerce Committee was instructed to inquire into "the relations of the chartered banks and the wheat pools, and the extent to which the guarantees by the Dominion government to the banks of the said pools' grain market account were utilized for the purpose of speculation in wheat on the Winnipeg or Chicago grain pits." In this committee the view prevailed that the disclosure of actual figures of the trading operations or holdings of the Agency would be indiscreet, as likely to affect market prices. In consequence, figures were not given, and the evidence is valuable chiefly for what was revealed as to methods and intentions. In June 1935, a bill to create a Wheat Board to take over the position which had come to exist under the Agency and to regularize it was referred for consideration to a special committee, and it is in the minutes of proceedings and evidence of this committee that the details were put on record. Among the figures asked to be produced before this committee[3] were:

Quantities of wheat on hand July 31, 1931
Quantities on hand at end of each subsequent month
Quantities purchased and sold:
  By months—Aug. 1, 1931, to Dec. 1, 1932
  By weeks—Dec. 31, 1932, to Nov. 1, 1933
  By days—Week ending July 22, 1933
  By months—Nov. 1, 1933, to Mar. 1, 1934
  By weeks—Mar. 1, 1934, to Aug. 31, 1934
  By months—Aug. 31, 1934, to May 31, 1935
Approximate average cost per bushel of all wheat carried, and separately of all wheat acquired after July 31, 1931, and of all old Pool wheat carried over, as of the dates May 1 and July 1, 1933; May 1, July 1, and October 1, 1934; and May 1 and May 31, 1935
Amount of total liability to the banks as guaranteed by the Canadian government as of a number of dates

Figures of bank indebtedness are hardly of permanent interest. Except when quantities of cash wheat had to be taken over, the borrowings represented the varying requirements for margins on futures account, and at the high point of prices in July 1933 there was

[1] *Minutes of Proceedings and Evidence, Select Standing Committee on Banking and Commerce*, Mar. 22, 1934, p. 90.

[2] *Minutes of Proceedings and Evidence, Special Committee on Canadian Grain Board Act*, June 28, 1935, p. 356.

[3] The data on quantities are shown in the Appendix Table.

a substantial credit balance in the banks. The peak of the indebtedness was reached on May 31, 1935, when borrowings stood at $80,301,741.78. The Agency stated that, as of August 31, 1931, the old Pool wheat carried over had cost it, to that date, 60.53 cents per bushel on the average. Beyond that date it was claimed that only the average costs of the total holdings could fairly be figured. As of April 30, 1933, this cost was 64.40 cents per bushel, which by May 31, 1935, had become 85.943 cents per bushel.

Analysis of These Operations

In the chart opposite page 268, the quantities of wheat purchased, sold, and on hand, by months, as recorded in this evidence, are depicted in their relationship to each other and to current Winnipeg and Liverpool prices and to overseas exports of Canadian wheat. At the risk of overcrowding the diagram, the attempt is made to bring under the eye at one time all of the main elements of the wheat market position in Canada during the four-year period so that general developments, coincidences, and differences can be conveniently traced without constant reference to many different sources of material.

The chart, as will be seen, is divided horizontally into three figures. In figure 3, at the base, are presented the Agency's monthly purchases (hatched blocks) and sales (solid black blocks) in close relationship to the course of prices at Winnipeg (heavy line) and at Liverpool (lighter line).

In figure 2 are shown the weekly overseas exports of Canadian wheat, the scale running downward so that the quantities are inverted over the price lines. For convenience in drawing and for general effect, these weekly quantities are drawn to a bigger vertical scale than the monthly quantities in figures 1 and 3, but within dotted white borders wheat exports by months are represented on the correct monthly scale. Thus comparison of quantities in all three figures can be made. The dotted black lines in this figure give the approximate weekly average which overseas exports should have held throughout the year if Canada's available export surplus was to be completely disposed of. This surplus was calculated by adding old carryovers to new-crop surplus, less reasonable new carryover, and making allowance for proportionate exports of flour to all countries and of wheat to the United States. While differences in carryover were considerable, the principal factor in the differences in supply from year to year, as shown by the dotted lines, were variations in wheat production, and thus some indication of the sizes of the crops is introduced into the material in the diagram.

In figure 1 appear the holdings of the Agency at the end of each month, distinguishing the portion carried over out of the 1930 crop from the accumulations resulting from the stabilization operations. The total carryovers of Canadian wheat are indicated by the full lengths of those columns, the tops of which have dotted outlines. The proportions of these carryovers to Agency holdings each year are directly apparent. In the last year these holdings were not reported after June 20, but there is little doubt that at the close of that crop year the Agency had claims on practically all the old wheat in Canada.

The Winnipeg prices, represented in the heavy price line, are daily spot cash prices, No. 1 Northern, in store at Fort William–Port Arthur. It is on the basis of these prices that Canadian farmers under normal conditions can sell day by day at country points. The Liverpool prices in the lighter line are near-by futures prices. What Liverpool prices should be selected for direct day-by-day comparison with prices at distant markets, such as Winnipeg, Chicago, and Buenos Aires, may be open to question, but probably the curve of ruling futures prices at Liverpool may be taken as most representative of the effects in that market of all conditions, immediate or more distant, and including interaction between the world's principal markets. For many good reasons Liverpool futures prices more nearly than those in any other single market represent world price levels, and the comparison suggested in the chart is therefore between Winnipeg prices and world prices. To eliminate the factor of variations in the exchange values of the currencies of the two countries, which were wide and frequent within the period, the Liverpool prices have been reduced to Canadian currency at the exchange rate of each day.

Before noting the relationships between the different elements in the chart, a few comments on the general flow of the price lines may be made. The sharp rise in October 1931 immediately followed departure from the gold standard by Great Britain and by Canada, and probably represented depreciated purchasing power of the currencies of these countries rather than a change in the value of wheat. From the new elevation the price lines tended downward to a low point in December 1932. This was also the low point in general wholesale prices in North America. The low point for wheat in the United States had been touched toward the end of November. At this period the bottom of the world economic deflation was reached. As is usual in deflation periods, prices of staple raw materials had fallen more rapidly than other classes of prices; and in the reflation which then began, which again is usual, raw-material prices have tended to move upward faster than the average of all wholesale prices. To the outstanding rise in prices from April to July 1933, further depreciation of the Canadian dollar, which then accompanied the United States dollar in its decline, undoubtedly contributed in part. When the world economic conference, in respect to which the world had been very hopeful, adjourned in July 1933 without substantial accomplishment, indexes of all kinds turned downward; at that time also there were thus conditions which were not peculiar to wheat. After November 1, 1934, fixed minimum prices were established by the Winnipeg Grain Exchange on request of the Agency and of the government, and after that date prices necessarily held at or above that minimum. A "peg" had previously been put in the market from August 15 to September 14, 1933, the effects of which appear in the Winnipeg price line.

With allowance for the probable effects of these general and special causes, the course of the wheat curve during the four years does not on the surface present unusual features. There is a distinct wave formation, a peak occurring about once in twelve months, but this is quite characteristic of wheat prices; so also is the tendency of prices to flatten out between the months of September and April. Between April and September world stocks of wheat are at the lowest point in the year and the varying prospects of the new Northern Hemisphere crops are market factors. By October, supplies from the Northern Hemisphere are pretty definitely known, as is also the acreage in the Southern Hemisphere and the probable amount of winter damage there, and the market for the next seven months is dealing with more or less fixed quantities in relation to the season's scale of demand as revealed in actual experience.

What were the obvious or probable effects on this wheat curve of the buying, selling, and withholding of the Agency? Among the effects it is of interest to look for, are:

1. Immediate effects of the buying or selling on the Winnipeg price at that point, in a rise, or decline or alteration of trend.
2. Immediate effects of such impact of extra pressure at Winnipeg on the relationship between the Winnipeg and Liverpool price lines.
3. Effects of quantities withheld by the Agency (*a*) on Winnipeg prices, and (*b*) on the relationship of Winnipeg to Liverpool prices.
4. Effects on quantities exported (*a*) of absolute changes in price levels, and (*b*) of changes in spread between Winnipeg and Liverpool.

First, then, as to indicated effects of the impact of buying or selling pressure on current Winnipeg prices. In 1931–32, net monthly purchases and sales were too small to have much influence and no clear policy in respect to them is indicated. In the subsequent crop years heavy net purchases were concentrated within the first four months. In 1932–33 the heaviest net sales were in the first two months, but in the next two years were in the latter half of the year. In August and September 1932, the Agency made net sales of 29 million bushels and then applied opposite pressure with the enormous purchases of 64 million bushels in October, well over twice as great as in any other single month, followed by purchases of 13 million in November. Yet from

August 8 to mid-December, whether the Agency was selling or buying, the trend of price continued steadily downward without appreciable change of angle or important change of relationship between Winnipeg and Liverpool.

The next important net purchases occurred in August–November 1933. For this period quantities are reported by weeks. In August all the net purchases were in the first two weeks, during which it will be seen prices continued to fall rapidly. Between August 15 and September 14 the Winnipeg market was "pegged"; that is, a minimum price was set by the Exchange below which trading could not take place, a condition being that the Agency should buy hedges at the "pegged" price provided other buyers did not appear. Under the "peg" some 15 million bushels were thus purchased. The flattening of prices at this point was clearly due to the "peg" and not to the buying. Prices again fell rapidly after removal of the "peg" to a low point on October 16. During this decline the Agency bought some 28 million bushels. There was then an abrupt recovery. In the week in which the turn took place the Agency bought only 2.6 million bushels. Both dip and rise occurred simultaneously at Liverpool, Winnipeg, and Chicago, and there is no reason to think the initiative lay in Winnipeg.[1] After holding well for the greater part of November, during which month the net purchases of the Agency were small, prices fell away again till the middle of December. Average closing prices in December were fractionally lower even than in October, and so the seasonal trend continued in December just as it had done the year before.

That there was not some obvious effect on the Winnipeg price line from the heavy buying during this period is all the more notable because at the end of September 1933 the Agency's holdings were 180 million bushels, whereas the total Canadian visible, including stocks in country elevators and in United States positions, was only 220 million bushels. At the beginning of 1934–35 the Agency's holdings became proportionately greater, and yet its large purchases in September 1934 barely served to hold the Winnipeg price as against a decline in world prices, and its still larger purchases in October failed to prevent a fall. It was under these conditions, and with commitments outstanding practically equal to all Canadian wheat off farms, that a request was made to the Winnipeg Exchange to reimpose a "peg."

Some immediate direct effect of the buying in September and October 1934 is suggested by the very big premium created for Canadian wheat. In the same months of the two previous years the spread between Winnipeg and Liverpool had remained fairly constant despite the buying. But the wheat market in Canada had by that time become entirely artificial, and even at a staggering cost in contingent liabilities it was not possible to make the price line move as desired, and resort was had to the compulsion of a rule of the Winnipeg Exchange.

There was only one other period of large purchases, July 1933, but these were balanced within the month by almost equal sales. For this month we have quantities by weeks and, for the week ended July 22, also by days. Since fluctuations were violent, it will be of interest to examine the distribution of purchases and sales. With the exception of one small lot in the last week, all the selling took place in the first 17 days on the sharp rise. On the 17th, 6.3 million bushels were sold within the day. Even this did not completely stop the rise, for the peak occurred on the following day, on which no sales were made. It has already been noted that nearly all economic indexes turned downward at about this time. A break of over 25 cents per bushel within three days occurred at Chicago and led to the closing of that market on July 21 and 22, to be reopened, under restrictions, on Monday, July 24. By the 27th Chicago prices had regained some 15 cents per bushel. Liverpool and Winnipeg markets remained open. While Chicago was closed on the 21st and 22nd, Liverpool steadied and held within three cents of the close on the 20th, while Winnipeg dropped 9 cents in the two days. The Agency bought 4.2 million bushels on the 20th. With Chicago closed on the 21st it made the staggering pur-

[1] See current comments in Broomhall's *Corn Trade News*, and WHEAT STUDIES, January 1934, X, 167–68.

chases of 15.7 million bushels in one day. This did not stop the break; for on the following day a point 11 cents lower was touched, but prices closed only about 5 cents down. An additional 3.3 million bushels was purchased on this last day. On the 24th Chicago opened a little above its close on the 20th and Winnipeg opened at about its close on the same date, and the two markets then proceeded together, the Agency making moderate purchases in the last week in the month.

To what extent the Agency's selling and buying may have modified price developments at Winnipeg cannot, of course, be determined. But they did not give to the price line at that time its characterictic features. In evidence the sales manager said of the purchase of 15 million bushels on July 21: "I wonder if it is realized what the results would have been had this action not been taken . . . . surely one does not need to stretch the imagination to realize what a condition of chaos would have developed."[1] Without any special support of this kind the Liverpool market held steady on this day at about 1½ pence per cental below the previous day and with a range between high and low of only a penny, and on the following day it was even steadier at only a penny lower. The Winnipeg price had worked itself up to a very high premium by the middle of July and all that happened was that it lost most of that premium and at the low point had come into a trading relationship to Liverpool more nearly approaching that which prevailed in the early part of the crop year when big export business was done. There is no instance in the four years in which Winnipeg prices suddenly fell away from Liverpool prices by more than the prevailing spread, determined by the competitive conditions of that year. On an export basis world buying comes to the support of a weak market. It is only assumption, therefore, that chaos would have resulted if the Agency had not intervened.

A point to be noted is that in each year prices did rise during some part of the year, and that after 1932 they rose each year more than they fell. There were forces at work which could move prices upward, but there were no coincidences between rising trends and net purchases by the Agency. It was in accordance with the declared policy of the Agency that its purchases should be concentrated in a certain part of the year. The point here noted is that the Agency did not participate in any elevation of price that occurred, and, indeed, was a net seller while prices were rising. There were forces in the market moving prices down and up which were more powerful than the resources at the command of the Agency.

To the first question as to the immediate effects on the Winnipeg price line of the impact of the Agency's purchases or sales, the answer must be that notable direct effects of this kind are not discernible. Indeed, the almost complete absence of visible evidence in the diagram of any important immediate impressions on the price line from the unprecedentedly heavy transactions of this market operator must create surprise and arouse reflection. To recur to October 1932, when, after heavy blows from above during August and September, the Agency suddenly made that mighty thrust from below with its purchases of 63 million bushels in a month, which the general manager afterward referred to as "terrifying," not even a bulge appears in the line. If market prices and trends were susceptible to large-scale buying or selling by speculative or manipulative operators in the way and to the extent commonly supposed, this must seem almost incredible. Buying by the Agency was far from being the only important buying in the Winnipeg market at that time, for by reference to figure 2 it will be seen that export business was then the largest in the four years. The Agency's operations were piled on top of the buying natural to an active period. Yet all that happened was that for the first three weeks of the month both cash and futures prices were almost absolutely steady, all closing prices for that time being covered within a range of 1 cent and the range between high and low on no single day being as great as 1 cent. At the end of the month prices were 2⅞ cents lower than at the beginning. The dead level of price, while it continued, was no doubt due to the

[1] *Proceedings, Special Committee on Canadian Grain Board Act*, p. 368.

willingness of the Agency to keep on accumulating at that level, but the questions of interest are why a rise was not induced or the trend changed. It is evident that mere buying, even in large volume, does not necessarily raise prices or divert trends.

That an increased readiness to buy often does have one or the other, or both, of these effects is unquestionable. There was, for example, the case mentioned above, in 1929, when against the logic of supply and demand North American prices rose in successive waves. That speculative buying by the public as well as by larger operators was a factor at that time there is no reasonable doubt, for the speculative spirit was then rampant in North America. Why should there have been results at that time which did not appear in October 1932? Without attempting to establish a complete answer to this question, the following points are raised for consideration.

Do not prices rise or fall only when a movement in either direction is in accordance with the majority opinion of all interests in the market? It must be kept in mind that the aggregate volume of trading in the world's wheat market, or standing by ready to enter it, is very great. There passes into some kind of use every day in the world, on the average, from 10 to 15 million bushels of wheat. There are some 159 countries or political divisions in the world which import or export wheat or flour, and buy, sell, or hedge according to their judgment of real values, taking into account their domestic supplies. All those who deal in actual wheat are anxious to be right in their judgment as to the true relation of supply and demand. They form an important part of the market. Then there is the speculative interest, which has its function to perform and which under certain conditions is capable of almost indefinite expansion. Most of those who speculate try to judge ahead what the interaction of supply and demand will bring about rather than to force prices to their own plans, and among them are some of the most alert and careful students of facts. Some of all these classes are operators in each of the world's principal grain markets and a proportion in each market is prepared by arbitrage transactions to keep all markets in line with what it believes to be the true price trends.

Against such an aggregate volume of actual and potential trading the resources of any individual or group, or even the huge resources put at the disposal of the co-operatives in North America, are almost insignificant. Now if such an operator starts to buy when the majority opinion is that conditions point rather to lower prices, there will be so many ready to sell that the operator can secure all he can carry at his price without raising the bid. If, however, the dominant opinion, whether well founded or not, is that higher price levels are probably justified, the operator who is insistent on buying will have to raise his bid with every new trade and others, in indefinite numbers, will probably join in the buying. In the same way a seller may dispose of all his holdings, or take on as heavy a "short" commitment as he thinks prudent, without breaking prices when the majority judgment is that prices should go higher; on the other hand, when the market looks for a decline, he must offer lower and lower to find buyers. The majority opinion as to the relation of supply and demand, checked by the rate at which wheat is actually being currently consumed, is the great force in the market which special operators encounter.

All this leaves unconsidered, of course, the broad question of how different the developments might have been if the Agency had not entered the market. There is no statistical material to examine in considering this question. Argument on one side rests on a conviction that so much buying and selling could not but have had a very powerful effect on prices whether it is apparent or not. On the other side it is held that no such presumption can stand, because any special effort in the market may be swamped by mere volume of trading, may become only a substitute for other trading instead of adding to pressure, or, as was experienced by the Federal Farm Board, may create reactions among other market factors which may nullify its influence on price.

As of interest in connection with the management's own view of its policy, that it was the buying of hedges when farmers were delivering in volume to an extent necessary to supplement purchases by a reduced number of speculators and purchases for export and domestic trade, a few facts may be pointed out. In the first place this must be an accurate description of policy throughout the periods in which the Winnipeg market was "pegged," for it was a condition of the "pegging" that the Agency should buy all hedges for which no other buyers appeared. As there were only insignificant purchases by the Agency after November 1, 1934, when a "peg" was put in to remain for the balance of that crop year, it is obvious there must have been plenty of other buying in the market to take care of the hedges in November and the subsequent months. In the first year of the four, 1931–32, either the policy had not yet been formulated or other buying was found sufficient, for the Agency's net purchases in the autumn months were very small. In 1932–33, with a big crop, farmers' deliveries were very heavy. In the month of September these deliveries aggregated 124.6 million bushels, the second heaviest monthly deliveries in the history of Western Canada. Yet the Agency in August and September made net sales of 29 million bushels, throwing this added load on the market, which seems to have carried it at a higher level of price than prevailed during the next two months of exceptional buying by the Agency and on much the same price trend. In October the Agency's purchases were equal to 90 per cent of the reduced farmers' deliveries in that month, although it must be doubtful if other buyers had suddenly disappeared. In August – November 1933, the Agency's purchases were equal to 42 per cent of the deliveries, and about the same percentage held in August–October 1934. The common feature of all these instances was that there was an attempt to support prices when they were subsiding from a peak touched in the transitional period between two crop years. The presence or absence of other satisfactory buying in the market was evidently judged by the course of prices.

The second line of examination suggested is as to immediate effects of buying and selling on the relationship between the Winnipeg and Liverpool price lines. It will be noted in the chart that very marked variations in this relationship occurred. The Winnipeg line appears sometimes above and sometimes on or below the Liverpool line. The price of Manitoba Northern at Liverpool should normally be higher than that at Winnipeg by the cost of transporting and handling from one market to the other. This cost varies with changes in freight rates and other charges, and ranges from about 12 cents to, at times, even 20 cents per bushel. The basic grade for Liverpool futures is not as high as Manitoba No. 1 Northern; this would, if delivered, command a premium, but under the rules such premium would be limited to about 3.6 cents per bushel. In the market, however, Manitoba wheat is very often above the delivery basis, the premium depending upon its relative quality to other wheats in that season and also upon its relative quantity. To add the minimum of necessary strength to a flour blend, millers may pay a large premium for Manitoba wheat when its supply is limited, but when supplies are large the premium tends to diminish. It is thus not possible to lay down a standard spread between Winnipeg and Liverpool futures, or between the cash price of No. 1 Manitoba at Winnipeg and the Liverpool future, which could be applied through a series of seasons. But unless the Liverpool price is actually higher than that at Winnipeg then a very unusual premium is contained in the latter.

In 1931–32 Canadian supplies were small and the Agency was withholding substantial quantities. The Liverpool line was above that of Winnipeg almost continuously throughout this year; but the margin was not great, and this meant that Manitoba wheats were commanding a moderate premium. In 1932–33 Canadian supplies were big, and, moreover, ocean freights became unusually high and the spread became greater. Beginning after the middle of that crop year, the tendency was for the Winnipeg line to approach and then cross the Liverpool line, until in 1934–35 it was far above it, which meant that an extravagant premium was then being asked for Canadian wheat.

The question is as to *immediate* effects on this spread of the impact of purchases and sales by the Agency. Such immediate effects do not appear. In 1932–33 and in 1933–34 it will be noted that Winnipeg prices were lower relative to Liverpool prices when the Agency was buying than they were later in the year when it was selling. As the reverse would be expected if there were direct effects between the two, it would seem that the answer to the question would be that there is no immediate direct relationship. There is nothing in the developments in 1931–32 nor indeed in the very artificial conditions in 1934–35 inconsistent with this conclusion.

The third question is as to the effects of the holding policy of the Agency on Winnipeg prices and on their relationship to Liverpool prices. It would probably be better to deal with the latter part of the question first. In 1931–32, holdings were fairly steady with a slightly rising trend, and whatever influence they may have had on the spread was probably evenly distributed. If, in the subsequent years, the eye travels in a direction slanting slightly to the right from the varying quantities indicated in figure 1 to the price spreads in figure 3, a coincidence between increased holdings and diminishing spreads or growing premiums clearly appears. Within two or three months of additions to quantities withheld from the market by the Agency, the price at Winnipeg rose relatively.

Before inquiring further into this coincidence it is well to bring under review also the facts about wheat exports as pictured in figure 2. Most of Canada's exports of wheat are to Europe. It is not the practice of Europe to accumulate imported wheat in storage, but rather to keep supplies afloat and moving toward it as needed for use. Of the different varieties of wheat this is particularly the case with Canadian, which tends to be made a regular element in the blend. Except in respect to a portion of the shipments on the long voyage from Vancouver, it is not the practice to put Canadian wheat afloat for Europe except on firm orders. Europe itself regulates the movement. After an order to ship is given there is necessarily some delay before the wheat is actually cleared from an ocean port; ocean tonnage must be arranged or sailing dates awaited, and perhaps wheat must be moved forward from some interior point to the seaport. The length of this delay will vary with a great many different conditions.

For the present purpose, it is assumed that Canadian wheat was shipped under the direction of Europe, that the quantities ordered forward from time to time were regulated by the quantities importers found they could sell in Europe at current prices, and that the average delay between orders and shipments during this period was two weeks. The time-scale in figure 2 is therefore moved back two weeks so that a shipment actually cleared in a week ending on the 15th of the month appears directly opposite the prices in the week ending on the first day of the same month. This arrangement at least brings prices and orders to ship more nearly into their true time-relationship, although it can be nothing but very rough approximation. No indication is suggested as to the time at which the importer may have purchased the wheat or put on a buying hedge to establish a price level. He may have become the owner of the wheat or have entered into a commitment many weeks before. It is the order to ship which is here in question and the assumption is that he gives his orders in accordance with the sales he can make in Europe at prices then current.

Looking now at figure 2, it is seen that quantities shipped varied over a wide range, reaching a maximum in the autumn of 1932 and diminishing to very small proportions in 1934–35. One special condition of ocean shipments from Canada is that the St. Lawrence River, one of its principal export routes, is closed to navigation for some five months in the year. It quite regularly happens that during November and the first week in December shipments out of Montreal are relatively heavy because balances of stocks owned there are being cleaned up. It also quite regularly happens that larger shipments begin to be made from Vancouver in October and November, which shipments on account of the long voyage will not reach Europe until January and February, beginning to arrive when shipments from the St. Lawrence fall off. Shipments in October, November, and the first part of December may thus be a little higher, and shipments in January and February a little lower than they probably would be if these special

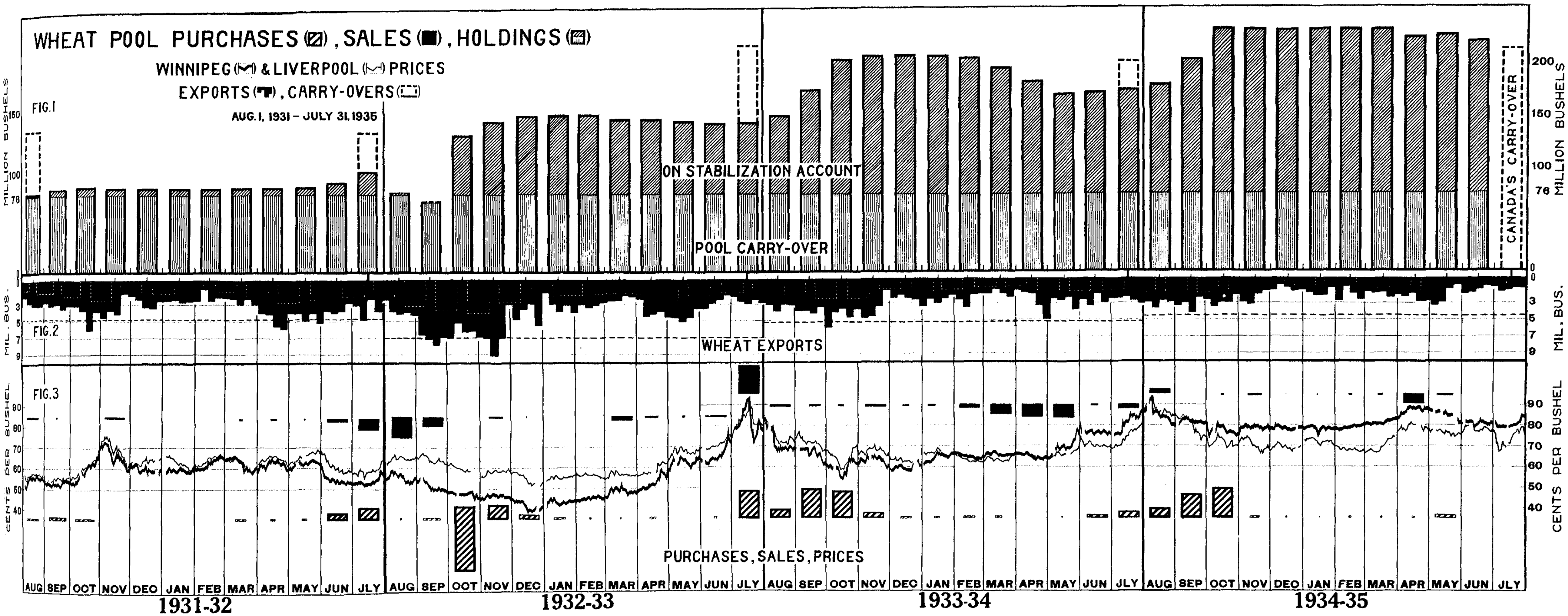

FIG. 1.—HOLDINGS OF WHEAT POOL CENTRAL SELLING AGENCY (data in Appendix Table) AND YEAR-END CARRYOVERS OF CANADIAN WHEAT IN NORTH AMERICA (Canadian official estimates)

Canadian Carryovers: total columns with dashed tops. *Pool Accumulations on Special Stabilization Account:* portions of columns crosshatched diagonally. *Pool Carryovers from 1930–31 Pool:* portions of columns crosshatched vertically.

FIG. 2.—WEEKLY OCEAN SHIPMENTS FROM NORTH AMERICAN PORTS OF CANADIAN WHEAT ONLY (Canadian official estimates)

Scale: inverted. *Monthly Quantities:* shown by dotted white lines and drawn to same scale as quantities in Figs. 1 and 3. *Weekly Quantities:* enlarged scale. *Note.*—The horizontal or time-scale in Fig. 2 is out of line with those in Figs. 1 and 3 by two weeks, on assumption that on the average there was delay of two weeks between ordering exports forward and actual clearance (see text). Quantities in Fig. 2 exported in the week ending September 15, for example, thus appear directly opposite prices for week ending September 1.

FIG. 3.—WINNIPEG AND LIVERPOOL PRICES AND MONTHLY PURCHASES AND SALES BY THE POOL

Pool Sales: solid black blocks above price lines (data in Appendix Table). *Pool Purchases:* crosshatched blocks below price lines (data in Appendix Table). *Scale:* sales and purchases as for holdings in Fig. 1 and as for monthly exports in Fig. 2. *Winnipeg Prices:* heavy line; daily closing cash prices of No. 1 Northern, basis in store Fort William–Port Arthur. *Liverpool Prices:* daily closing prices of near-by futures, basis good milling wheat in store at Liverpool, reduced to Canadian currency at daily rates of exchange.

navigation conditions did not exist. Again, in April and May a moderate peak in shipments normally occurs when navigation reopens on the St. Lawrence, and wheat acquired during the winter out of stocks tributary to that route are rushed forward. A part of these first shipments may be regarded as a belated movement which would probably have been distributed over immediately preceding weeks if navigation had been open all the time. With a slight leveling out of the peaks that appear at these two seasons, the contour of the figure of export shipments may, on the present assumption, be compared with the price lines and the quantities withheld from market.

It will be noticed at once that the largest shipments occurred in 1932–33, when the Liverpool line was on top for most of the year and the average spread was the widest in the period; that the second largest shipments were in 1931–32, when the Liverpool line was on top nearly all the year but the spread was narrower; that the third largest shipments were in 1933–34, when the Liverpool line was below more than half the year; and that the smallest were in 1934–35, when the Winnipeg line was on top by a very wide margin for more than ten months. Taking parts of a year, say four months, the largest shipments in 1931–32 were in the last four months and in the other years in the first four months, and in each of these periods the premium on Canadian wheat was the smallest in the year.

If c.i.f. parcel prices at Liverpool, instead of near-by futures, be taken as the basis on which the chief imported wheats were going into consumption in Europe, and, therefore, presumably the basis on which new orders to ship were being placed, and if these c.i.f. prices of Canadian, Argentine, and Australian wheats be plotted and brought into time-relationship with the quantities in figure 2, the correspondence between variations in the premium on Canadian wheat and in quantities shipped becomes evident even in considerable detail. Another influence clearly indicated in a diagram so drawn is price elevation, that is, the degree to which the price in any week is above or below the average price level for that crop year. With allowance for changes in elevation, it unquestionably happened that more or less Canadian wheat was ordered forward as premiums fell or rose.

By comparison of the weekly shipments with the dotted black lines which indicate the average quantity that should have been moved to dispose of the Canadian surplus, including holdings of the Agency, it will be noted that in no extended period was more being moved than was proportionate to this surplus, while in 1933–34 the appropriate average was reached in only one week and in 1934–35 in not a single week. Even when the price position was most favorable, shipments did not run above the average necessary for movement abroad of the exportable surplus from Canada. At high premiums the world would take a little wheat, but only a little, and take it fairly steadily.

There is thus clear coincidence in the diagram between increased holdings and higher premiums and between the latter and smaller exports. There is no coincidence by months between buying or selling by the Agency and movements of price. Premiums became higher as more and more wheat was withheld from the market and the marketable supply of a wheat very important in a mill mix became smaller. It was in accordance with the working of the law of supply and demand. The effects in this respect of the Agency's holding policy were due to its creating the conditions for a particular application of this law, and not to any original force in the market inherent in buying or holding. The results attained were at the cost of an enormous contingent liability and of a considerable reduction in the quantity of Canadian wheat consumed.

What general effects, not appearing in the diagram, price movements initiated at Winnipeg may have had on Liverpool or world prices there is no satisfactory way of determining. The day-by-day relationship between the two price lines is very intimate, as would be expected, since both markets were dealing with the same problem and were in continuous touch with each other. The chief divergences that appear are those caused by differences in spread. Reciprocal influence there undoubtedly was, but it is evident that

Winnipeg could not compel Liverpool. After November 1, 1934, Winnipeg made a price level and safeguarded it by the prohibition of trades below that level, but Liverpool took its own course, apparently under influences similar to those in other years. Winnipeg could extend its premium but it was only when it kept within reasonable relation to Liverpool and only when both together did not go too high that satisfactory business could be done.

Concluding Observations

By the month of May 1935, the Agency had worked itself into a position of almost complete domination of the Canadian market. At its specific request the Winnipeg Exchange had deferred the opening of trading in October futures, and although July futures had been on the board for some time the Agency had not recognized them or operated in them, with the result that the market in May futures was very narrow and prices relatively weak. It was therefore not practicable for anyone who had contracted to deliver wheat in May to switch this hedge to July without loss, and the switch could not be made to any other month because no other month was on the board. At the beginning of April the Agency was holding contracts calling for delivery in May, at Fort William–Port Arthur, of some 234 million bushels. These contracts represented hedges on wheat and flour in all positions. Even if most of the wheat had been in positions directly tributary to the delivery point, the elevators at that point were capable of holding only a fraction of this quantity. The trade was thus at the mercy of the Agency and was so mainly because it had not been able to distribute its hedges in the usual manner. That hardship would be imposed on the trade if any future option was abandoned or militated against by an operator with the resources of the co-operatives was recognized, as has been noted, by the Federal Farm Board in its *First Annual Report*.

It had long been evident in Canada that the position should be regularized. The Agency was technically a private corporation of doubtful legal standing over which the government had no direct legal control, and yet it had committed the government to enormous contingent liability and on the strength of government credit had acquired monopolistic power. Early in 1935 notice was given by the government that legislation would be introduced, but the bill to create a Wheat Board was not brought down until the month of June. It was before a committee to which this bill was referred for consideration that the figures of the operations of the Agency were submitted which have been the special material of the present study.

With developments beyond the point covered by these figures it is not proposed to deal in detail. It may be briefly stated, however, that under the Act, which became law on July 5, 1935, the Canadian Wheat Board was constituted. Power was given to this board to acquire the holdings of the Agency, both cash wheat and futures, on terms to be approved by the government, and it was made its duty to dispose of these holdings "as may be reasonably possible, having regard to economic conditions." Except in respect to the futures contracts thus taken over, no power was expressly conferred to deal in futures or, therefore, to carry on supporting operations as the Agency had done. Actual wheat the board was restricted to buying only from the producers thereof. It was made its duty, subject to government approval, to fix a price at which it would thus buy, and the experiment with a fixed minimum price to producers, the third of the original alternative proposals, was begun. In selling, it was made the duty of the board "to sell and dispose of from time to time all wheat which the Board may acquire, for such price as it may consider reasonable, with the object of promoting the sale and use of Canadian wheat in world markets"; and "to offer continuously wheat for sale in the markets of the world through the established channels"; provided that the board might use agencies of its own, if in its opinion any existing agencies were not operating satisfactorily. A wide range of discretion was given to the board and large reserve powers were included, but if the wording of the statute is interpreted in the light of the discussions in Parliament the intention seems clearly indicated that both buying and selling policies were to be altered for the future. The new position created was still artificial but it was intended to be different. This was the reaction of Parliament to the full disclosure of the operations during the previous four years.

The main purpose of this study has been to direct attention to a period in which special operations in the wheat markets, financed by governments and of unprecedented magnitude, were carried on in the United States and in Canada, and to assemble some of the available material in a form that might facilitate analysis rather than to make a complete analysis and offer definitive conclusions. In the course of this treatment three general questions have been raised to which answers obviously indicated by the facts have been suggested. To the first two of the questions—whether a market operator can bend the price line at will, or block or divert any major trend of prices—it has been suggested that the experience of the Federal Farm Board returned a definite answer in the negative. It is evident that the experience of the Agency in Canada fully supports that answer. There is no evidence in the facts in either country that this sort of so-called manipulation of price or trends is practicable, even to a very powerful operator. There are forces in the market against which, when there is conflict, such an operator cannot prevail.

For answers to the third question—as to possible influence on price fluctuations and temporary movements — the more complete detail available for Canada has been examined, and it has been seen that immediate reactions of price to the impact of buying and selling by the Agency, if any clear instances can be found, were surprisingly few. In most cases, even when the operations were very large, no obvious changes occurred that would suggest a direct or proportionate causal relationship. Only during the periods in which the Agency and the Stabilization Corporation were buyers of all or practically all offerings could they make even a domestic price. By bringing into operation a local application of the law of supply and demand through withholding large quantities from market, these agencies undoubtedly influenced the appearance of domestic premiums, but these were at the expense of quantities sold and left large surpluses which, according to the same law, must inevitably tend to affect future prices unfavorably.

Were any of the effects worth while? In view of these experiences, could public policy in the future justify other experiments in price control through market operations? If governments cannot produce definite results by such experiments, it is certain that private operators, with resources incomparably smaller, cannot possess the power, with which they are so often credited, of bending price to their will.

This study was written at the request of the Food Research Institute by W. Sanford Evans of Winnipeg, Canada.

The episode here treated is not concluded, and to some extent presentation at this moment involves consideration ad interim. Final interpretation may be modified by the experiences, now in course, of the Canadian Wheat Board. Nevertheless, we have felt that consideration of Canadian experience in wheat marketing prior to formation of the Wheat Board is so important as to justify examination and interpretation of an uncompleted episode.

At the present stage, opinions of different students may well be at variance on numerous points involved. Elsewhere Mr. Evans has expressed certain views that deviate in important respects from those held by some in the Food Research Institute. Here he has been at pains to draw only such conclusions as appear to him well substantiated by facts here presented or referred to, and to avoid incidental expression of views with which other well-informed students may reasonably differ.

APPENDIX

TABLE I.—CANADIAN CO-OPERATIVE WHEAT PRODUCERS: WHEAT PURCHASES, SALES, AND QUANTITIES ON HAND, AS REPORTED TO THE SPECIAL COMMITTEE ON THE CANADIAN GRAIN BOARD ACT, JUNE 27, 1935

(Thousand bushels)

Period ending	Purchases during period	Sales during period	Net sales or (purchases)	On hand, end of period	
				Special account	Total[a]
By months					
1931 July 31..	....	....	....	3,178	79,178
Aug. 31..	1,740	1,672	(68)	3,246	79,246
Sept. 30..	3,900	166	(3,734)	6,980	82,980
Oct. 31..	2,550	....	(2,550)	9,530	85,530
Nov. 30..	....	2,105	2,105	7,425	83,425
Dec. 31..	....	....	....	7,425	83,425
1932 Jan. 31..	....	....	....	7,425	83,425
Feb. 29..	....	....	....	7,425	83,425
Mar. 31..	1,050	315	(735)	8,160	84,160
Apr. 30..	445	610	165	7,995	83,995
May 31..	465	100	(365)	8,360	84,360
June 30..	7,649	3,315	(4,334)	12,694	88,694
July 31..	12,266	1,358	(10,908)	23,602	99,602
Aug. 31..	175	20,926	20,751	2,851	78,851
Sept. 30..	1,685	9,927	8,242	(5,391)	70,609
Oct. 31..	63,598	....	(63,598)	58,207	134,207
Nov. 30..	14,652	1,225	(13,427)	71,634	147,634
Dec. 31..	4,113	30	(4,043)	75,717	151,717
By weeks					
1933 Jan. 2..	....	....	....	75,717	......
7..	100	....	(100)	75,817	151,817
14..	1,087	....	(1,087)	76,904	......
21..	....	....	....	76,904	......
28..	....	....	....	76,904	152,904
Feb. 4..	....	....	....	76,904	......
11..	....	....	....	76,904	......
18..	....	....	....	76,904	......
25..	200	....	(200)	77,104	153,104
Mar. 4..	70	300	230	76,874	......
11..	....	....	....	76,874	......
18..	....	....	....	76,874	......
25..	....	4,209	4,209	72,665	148,665
Apr. 1..	....	....	....	72,665	......
8..	....	....	....	72,665	......
15..	....	1,285	1,285	71,380	......
22..	640	....	(640)	72,020	......
29..	....	....	....	72,020	148,020
May 6..	....	850	850	71,170	147,170
13..	....	....	....	71,170	......
20..	....	....	....	71,170	......
27..	....	....	....	71,170	147,170
June 3..	....	....	....	71,170	......
10..	....	....	....	71,170	......
17..	....	....	....	71,170	......
24..	300	200	(100)	71,270	142,270
July 1..	....	1,928	1,928	69,342	......
8..	....	4,004	4,004	65,338	......
15..	....	16,545	16,545	48,793	......
By days					
July 17..	....	6,332	6,332	42,461	......
18..	....	....	....	42,461	......
19..	....	....	....	42,461	......
20..	4,150	....	(4,150)	46,611	......
21..	15,705	....	(15,705)	62,316	......
22..	3,303	....	(3,303)	65,619	141,619
By weeks					
July 29..	4,402	936	(3,466)	69,085	145,085

Period ending	Purchases during period	Sales during period	Net sales or (purchases)	On hand, end of period	
				Special account	Total[a]
By weeks					
1933 Aug. 5..	4,324	300	(4,024)	73,109	......
12..	4,085	215	(3,870)	76,979	......
19..	823	1,327	504	76,475	......
26..	27	433	406	76,069	152,069
Sept. 2..	156	401	245	75,824	......
9..	8,351	559	(7,792)	83,616	......
16..	11,696	....	(11,696)	95,312	......
23..	6,225	589	(5,636)	100,948	......
30..	2,625	....	(2,625)	103,573	179,573
Oct. 7..	5,720	....	(5,720)	109,293	......
14..	14,332	....	(14,332)	123,625	......
21..	2,600	56	(2,544)	126,169	......
28..	3,186	730	(2,456)	128,625	......
31[b].	1,100	....	(1,100)	129,725	205,725
By months					
Nov. 30..	5,490	2,205	(3,285)	133,010	209,010
Dec. 31..	1,014	615	(399)	133,409	209,409
1934 Jan. 31..	554	773	219	133,190	209,190
Feb. 28..	1,120	3,631	2,511	130,679	206,679
By weeks					
Mar. 3..	35	626	591	130,088	......
10..	696	916	220	129,868	......
17..	....	2,113	2,113	127,755	......
24..	....	3,135	3,135	124,620	......
31..	....	3,101	3,101	121,519	197,519
Apr. 7..	....	2,978	2,978	118,541	......
14..	....	4,250	4,250	114,291	......
21..	....	3,354	3,354	110,937	......
28..	....	2,700	2,700	108,237	184,237
May 5..	....	4,548	4,548	103,689	......
12..	....	5,337	5,337	98,352	......
19..	....	2,081	2,081	96,271	......
26..	....	249	249	96,022	172,022
June 2..	100	687	587	95,435	......
9..	....	256	256	95,179	......
16..	588	304	(284)	95,463	......
23..	2,390	26	(2,364)	97,827	......
June 30..	209	117	(92)	97,919	173,919
July 7..	865	384	(481)	98,000	......
14..	2,195	1,472	(723)	99,123	......
21..	988	2,305	1,317	97,806	......
28..	2,755	431	(2,324)	100,130	176,130
Aug. 4..	25	1,129	1,104	99,026	......
11..	1,650	1,949	299	98,727	......
18..	1,450	420	(1,030)	99,757	......
25..	2,285	1,511	(774)	100,531	......
31..	4,877	....	(4,877)	105,408	181,408
By months					
Sept. 30..	23,974	....	(23,974)	129,382	205,382
Oct. 31..	29,716	292	(29,424)	158,806	234,806
Nov. 30..	922	1,385	463	158,343	234,343
Dec. 31..	150	10	(140)	158,483	234,483
1935 Jan. 31..	25	57	32	158,451	234,451
Feb. 28..	272	395	123	158,328	234,328
Mar. 31..	179	425	246	158,082	234,082
Apr. 30..	207	7,627	7,420	150,662	226,662
May 31..	3,363	1,579	(1,784)	152,446	228,446

[a] Exact figures of balance of old carryover on hand at the end of each month were not introduced in evidence, but the Treasurer of the Agency stated that variations were slight and that approximately correct totals could be reached by adding to holdings on "Special account" on any date the round quantity of 76 million bushels. This has been done in this column.

[b] Part week.

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